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A NEW SPECIES OF *ONCOCNEMIS*
FROM THE WESTERN UNITED STATES
(NOCTUIDAE:CUCULLIINAE)

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FOR MANY YEARS THE AUTHORS have possessed a series of an *Oncocnemis* species that was believed to be new. Until recently, we were under the opinion that this new species was probably most closely related to *O. hayesi* Grote, as it superficially resembled that species more than it did any other species within the genus. Much to our surprise, when genitalic mounts of both sexes had been prepared and critically examined, it became apparent that the superficial resemblance to *hayesi* had been misleading. With further examination of other species in this section of the genus, it was found that *O. melantho* Smith, described from specimens collected in the Yosemite Valley, California, was extremely closely related to *O. sandaraca* Buckett and Bauer, herein described as new.

Both *O. melantho* and *O. sandaraca* occur sympatrically at various localities in the central Sierra Nevada, and the adults rely, in part at least, on the same species of Rabbit brush (*Chrysothamnus* spp.) as a food source. Both species occur where there is floral influence of the Great Basin type. It is also interesting to note that while both species occur diurnally on flowers, only *sandaraca* has been taken nocturnally. The frequency of *sandaraca* occurring during diurnal hours is much less than that for *melantho*.

***Oncocnemis sandaraca* Buckett and Bauer, new species**

Male: Ground color of primaries dorsally yellowish-red (thus the name *sandaraca*, from Latin), transverse lines and marks conspicuous; secondaries dorsally a pale yellow with black exterior band. Head with vertex clothed in bicolorous elongate flattened dentate hairs, basally tan, apically brown; between vertex and frons a dark brown transverse band is evident; frons clothed in tan simple hairs; palpi exterolaterally clothed pre-



Fig. 1. Distribution map of *Oncocnemis sandaraca* Buckett and Bauer showing known distribution.

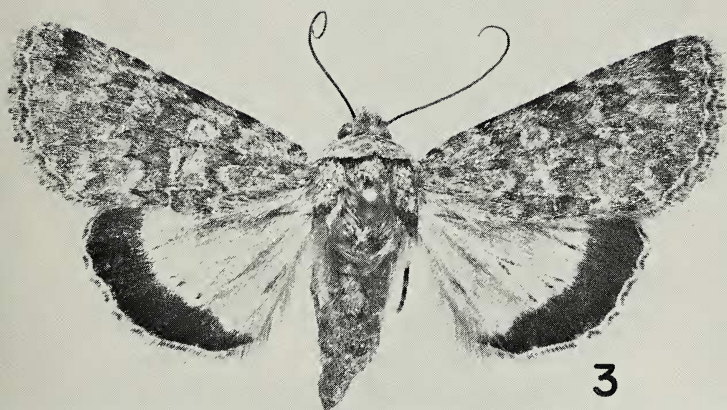


Fig. 2. Holotype male, *O. sandaraca*, dorsal view. Johnsville, Plumas County, California, 6 September 1959, ex. fluorescent black light (W. R. Bauer & J. S. Buckett).

Fig. 3. Allotype female, *O. sandaraca*, dorsal view. Same locality and collectors as in fig. 2, 8 September 1960.



Fig. 4. Male, *O. melantho* Smith, dorsal view. Road to Spencer Lakes, 8 miles southwest of Johnsville, Plumas County, California, 10 September 1961 (W. R. Bauer & J. S. Buckett).

Fig. 5. Female, *O. melantho*, dorsal view. 13 miles northeast of Garden Valley, Boise County, Idaho, 27 August 1965 (W. R. Bauer, J. S. Buckett & M. R. Gardner).

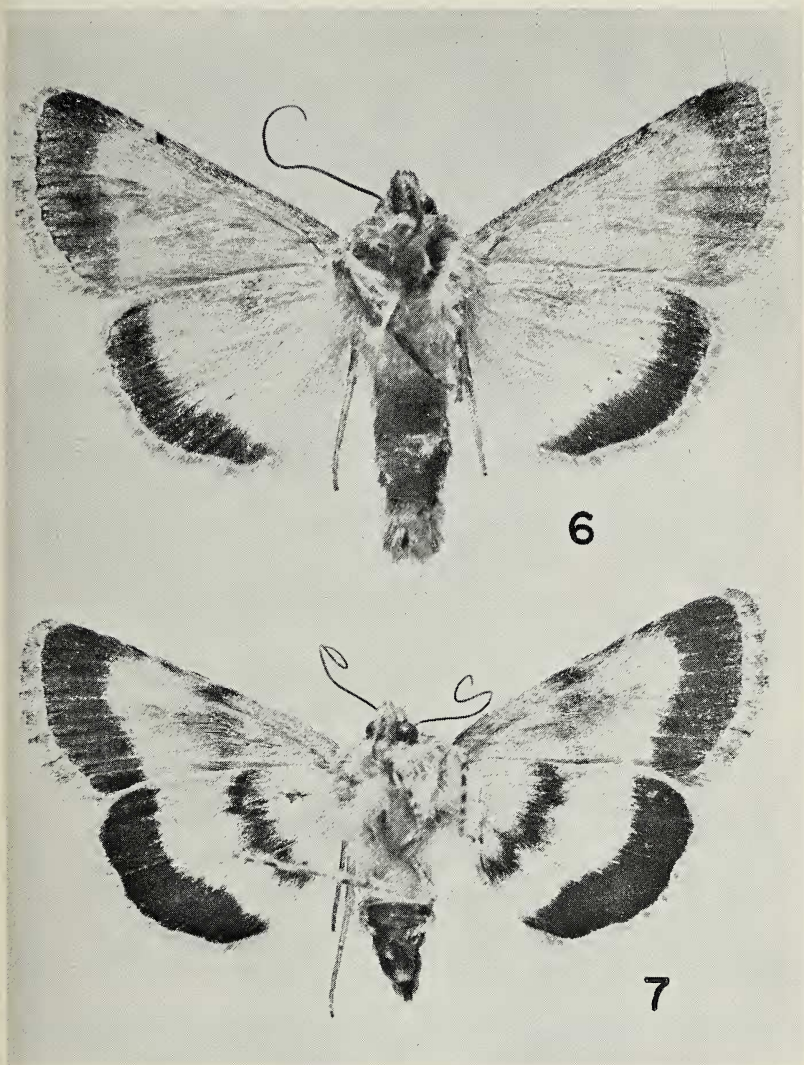


Fig. 6. Holotype male, *O. sandaraca*, ventral view. Data same as for fig. 2.

Fig. 7. Female, *O. melantho*, ventral view. Data same as for fig. 5.

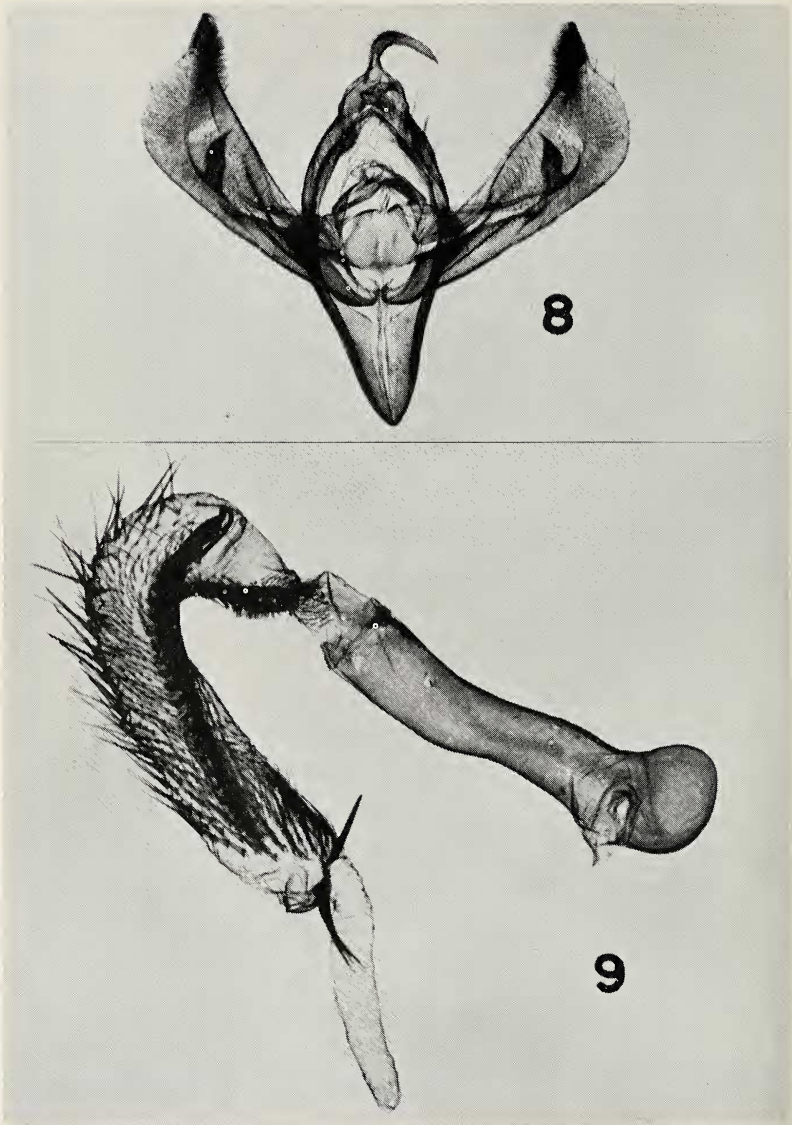


Fig. 8. Paratype male, *O. sandaraca*, genitalia minus aedeagus. Johnsville, Plumas County, California, 10 October 1966 (H. J. Pini), Bauer-Buckett Slide No. 66L19-3.

Fig. 9. Paratype male, *O. sandaraca*, aedeagus. Data same as for fig. 8.

dominantly in tan simple scales, but a few brown scales present also, ventrally clothed in elongate tan and brown simple hairs; terminal segment of palpi short, clothed in brown scales; compound eyes weakly fringed dorsally and posteriorly with tan tipped brown simple hairs or "lashes"; antennae with scape and pedicel clothed in tan scales; flagellomeres brown, dorsally clothed weakly in tan-brown scales, ventrally weakly ciliate, ciliations becoming more pronounced apically. Thorax with collar tricolor, composed of elongate scales, basally and apically yellowish-red, medially brown so as to form a transverse band; tegulae clothed in white, tan, brown, and dark brown simple hairs and elongate scales, appearing most lightly colored inwardly (border near disc); as in tegulae except possessing a greater percentage of simple hairs vs. elongate scales; posterior tuft composed of tan colored elongate scales; ventrally clothed in light tan simple, elongate hairs; legs with femora dorsally clothed in tan and brown scales and hairs, ventrally clothed in elongate ochreous and tan simple hairs; tibiae with tibial claw pronounced; meso and meta tibiae dorso-basally clothed with a bunch of elongate tan simple hairs, dorso-apically clothed in mixture of tan and dark brown scales; tarsi predominantly clothed in black scales, but each segment possessing an apical annulus of tan scales; primaries dorsally of ground color; costal subcostal and radial veins clothed in ochreous except where transverse lines intersect costa; basal one-half line geminate on costa, basally brown, apically ochreous; basal and transverse anterior areas contiguous, clothed in reddish-yellow scales; transverse anterior line geminate, basally ochreous, apically brown, strongly marked costally, thence undulating to inner margin; median area with conspicuous brown transverse shade, strongly marked costally, also dark brown scaling present on Cu_{12} and $2dA$ veins; orbicular round, outlined in dark brown, thence ochreous, centrally overlain with brownish scales; reniform trapazoidal, broadest apically, narrowest basally; transverse posterior line geminate on costa, dark brown, centrally filled with ochreous, thence a single brown undulating line separating dark median area from yellowish-red portion of subterminal area; subterminal area basally more ochreous in area of radial and medial veins and more yellowish-red in area of cubital veins, apically brown to subterminal line, veins outlined in dark brown; subterminal line an ochreous transverse shade from costa to M_1 , thence interrupted on veins to inner margin; terminal aera checkered yellowish-red and dark brown, the darker color appearing on veins; terminal line brown, faint; fringes tricolor, basally ochre-

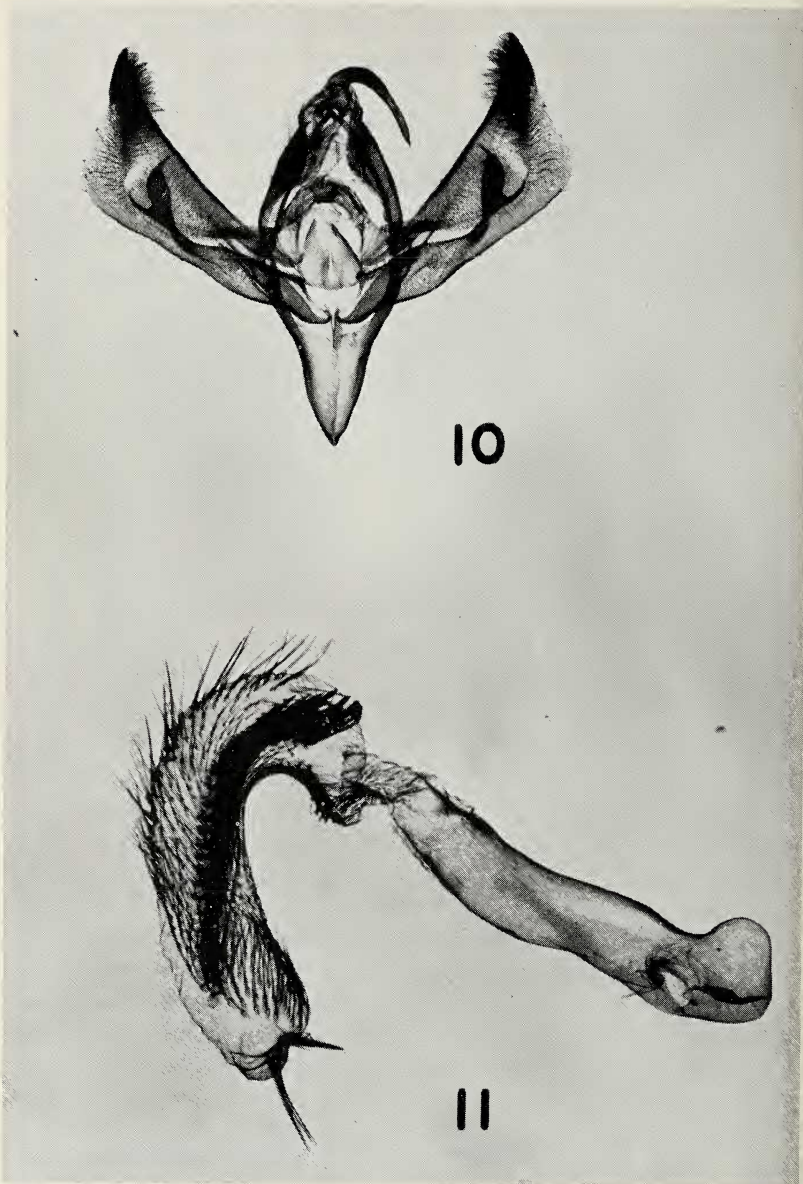


Fig. 10. Male, *O. melantho*, genitalia minus aedeagus. Road to Spencer Lakes, 8 miles southwest of Johnsville, Plumas County, California, 7 September 1960 (W. R. Bauer & J. S. Buckett), Bauer-Buckett Slide No. 66L16-3.

Fig. 11. Male, *O. melantho*, aedeagus. Data same as for fig. 10.

ous, medially dark brown, apically light brown; ventral surface ochreous basally to just preceding subterminal line, clothed in ochreous simple, elongate hairs; transverse posterior line represented costally as dark brown dash, thence only a suggestion of it appearing on medial veins; exterior border dark brown; fringes appearing tricolor, basally ochreous, somewhat darker between veins, medially dark brown, apically tan; secondaries dorsally with basal two-thirds ochreous, basal one-third scantily irrorated with brown scales, this irroration appearing concealed due to additional clothing of elongate simple ochreous hairs; faint brown scalation present just preceding exterior band on Cu_1 , Cu_2 , M_1 , and M_2 ; apical one-third of wing a dark brown band, the veins contained therein outlined in near black scales; fringes tricolor, basally ochreous, medially dark brown, apically creamy-white; ventral surface ochreous for basal three-fourths, apically with a broad brown band (otherwise marked as in dorsal surface); discal lunule faint; fringes lighter than dorsal surface, mostly ochreous, but with brown medially. Abdomen dorsally clothed in brown and ochreous scales, intermixed with sparsity of light tan simple hairs; apically clothed in admixture of brown and ochreous elongate flattened and simple hairs; ventrally clothed in tan simple scales and simple hairs. Greatest expanse of forewing 16 mm. Genitalia as in figures 8 and 9.

Female: More somber in coloration than in male, lacks as much reddish coloration as in male; primaries with more brown coloration; basal one-third of secondaries darker than in male, as though a dirty brownish coloration; ventral surface of primaries with brown in the tan basal three-fourths of surface, both median shade and transverse posterior line represented in dark brown costally, otherwise surface as in male; secondaries ventrally as in male, but with less yellow coloration, so as to appear "washed out." Greatest expanse of forewing 16 mm. Genitalia as in fig. 12. Holotype in collection of Entomology type collection, University of California, Davis, California.

Specimens examined

Holotype male: Johnsville, Plumas County, California, 6 September 1959, ex. 15 watt fluorescent black light (W. R. Bauer and J. S. Buckett). Paratypes: 64 males and 33 females; 1 female (designated Allotype) same locality and collectors as for Holotype, 8 September 1960; 1 male, same locality as holotype, 21 September 1962 (H. J. Pini), Bauer-Buckett Slide No. 66L16-1; 1 male, same locality as preceding, 10 October 1966 (H. J. P.), Bauer-Buckett Slide No. 66L19-3; 1 male, same locality as preceding, 3 October 1966 (H. J. P.), Bauer-Buckett Slide No. 66L19-1; 1 female, same locality as holotype, 15 September 1962 (H. J. P.), Bauer-Buckett Slide No. 66L16-2; 1 female, same locality as preceding, 8 October 1966 (H. J. P.), Bauer-Buckett Slide No. 66L19-2; 1 female, same locality as preceding, 3 October 1966 (H. J. P.), Bauer-Buckett Slide No. 66L19-4;

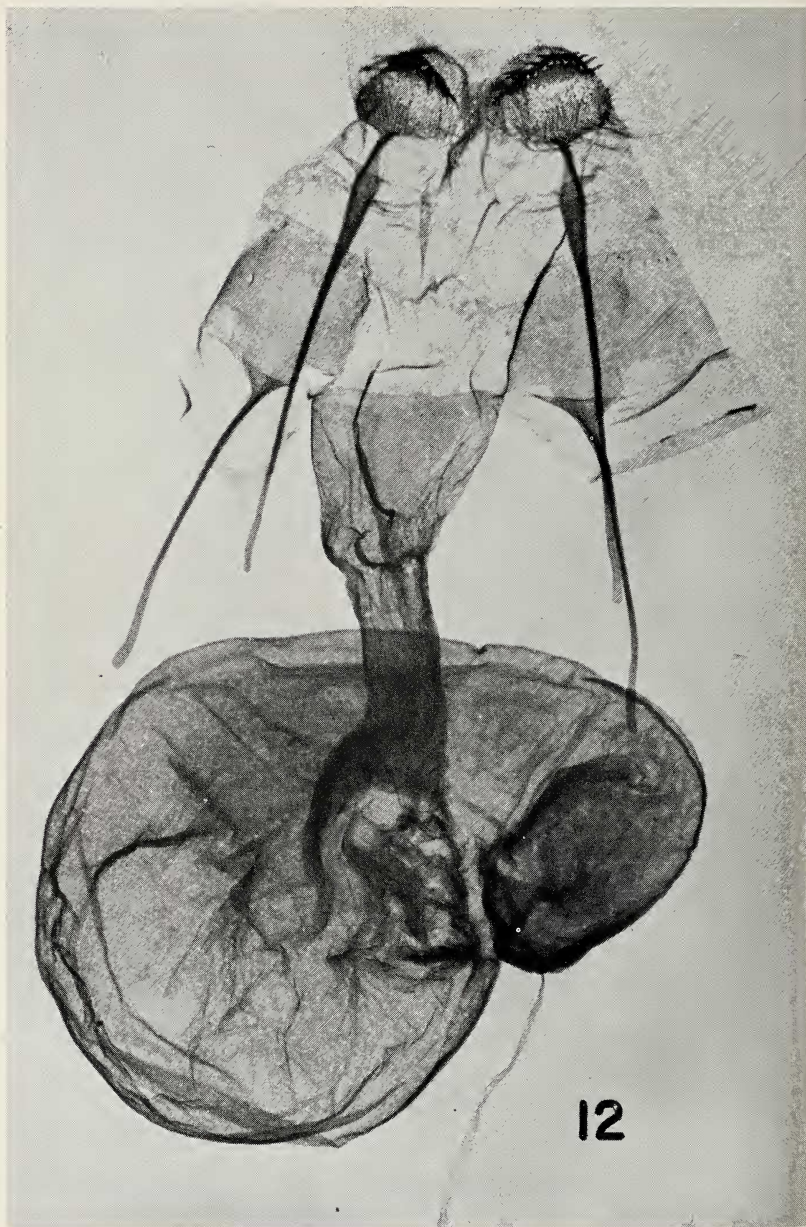
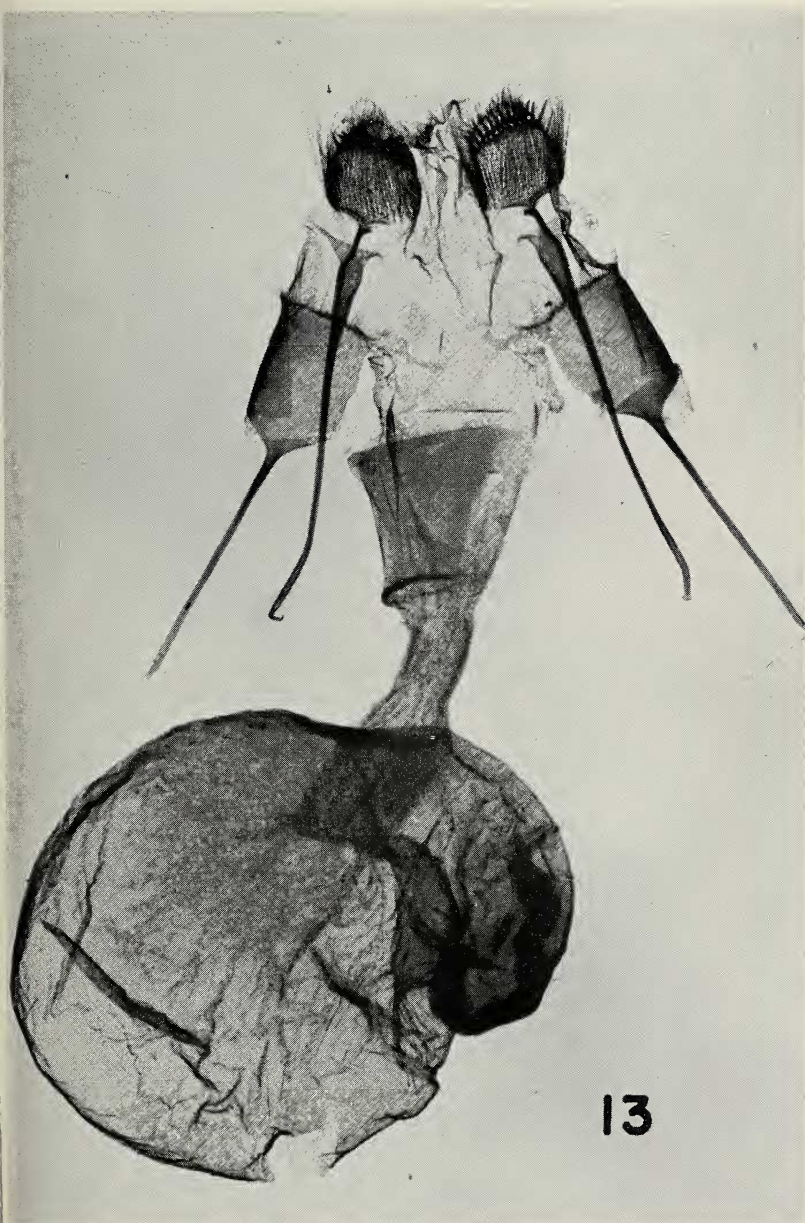


Fig. 12. Paratype female genitalia, *O. sandaraca*. Johnsville, Plumas County, California, 15 September 1962 (H. J. Pini), Bauer-Buckett Slide No. 66L16-2.



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Fig. 13. Female genitalia, *O. melantho*. Mt. Ingalls, Plumas County, California, 12 September 1961 (W. R. Bauer & J. S. Buckett), Bauer-Buckett Slide No. 66L16-4.

45 males, 23 females, Johnsville, 2 September - 5 November 1959 - 1966 (H. J. P., W. R. B., J. S. B., and M. R. Gardner); 1 male, Road to Spencer Lakes, 8 miles s.w. Johnsville, Plumas County, California, 24 August 1961 (W. R. B. & J. S. B.); 5 males, 2 females, same locality as preceding, 10 September 1961 (W. R. B. & J. S. B.); 1 male, same locality as preceding, 9 September 1966 (J. S. B., M. R., R. C., J. L. & B. W. Gardner); 1 male, 1 female, same locality as preceding, 26 September 1959 (H. J. P.); 1 male, Nelson Creek, Plumas County, California, 17 September 1940 (W. R. B.); 1 male, same locality and collector as preceding, 2 September 1940; 1 male, 1 female, Monitor Pass, Alpine County, California, 8 September 1964 (W. R. B. & J. S. B.); 1 male, same locality and collectors as preceding, 9 September 1964; 3 males, Woodfords, Alpine County, California, 8 October - 21 October 1962; 1 male, Grizzly Meadows, Trinity County, California, 10 September 1964 (G. E. Buxton); 1 female, 6 miles n.w. Cedarville, Modoc County, California, 8 September 1963 (W. R. B. & J. S. B.); 1 female, Tulelake Inspection Station, Modoc County, California, 22 September 1965; 1 male, 2 females, 3 miles n. Tollgate, Umatilla Co., Oregon, 6 September 1963 (W. R. B. & J. S. B.).

Oncocnemis sandaraca can readily be distinguished from *O. melantho* by the great differences in color and lesser differences in maculation. *O. sandaraca* possesses yellowish-red to ochreous-brown primaries dorsally; whereas, *melantho* possesses greyish to greyish-olive primaries dorsally. The ventral surface of the primaries in *sandaraca* is as described, but in *melantho*, the lighter portion is off white and not at all ochreous, or possessing any yellowish color; also *melantho* may have a black transverse medial band (corresponding to the median shade of the dorsal surface) either strongly or weakly expressed; the exterior band in *melantho* is considerably broader than that of *sandaraca*. The secondaries of each species are distinctly different interspecifically. *O. sandaraca* possesses secondaries as described; whereas, dorsally *melantho* possesses a dark basal one-third, a white, or brown medial one-third and a broad black exterior band (as in figures 4 and 5); the fringes are noticeably more whitish than in *sandaraca*. The ventral surface of the secondaries in *melantho* are also quite different than for *sandaraca*: dorsally they are with basal and medial transverse areas white, or irrorated with black scales; two areas are separated by a black band; just preceding broad exterior band there is another faint black line which parallels the inner margin of this broad black band. This exterior band in *melantho* is much broader than the exterior band in *sandaraca*, and *melantho* possesses much whiter fringes in comparison to *sandaraca*.

Nothing is yet known concerning the immature stages of either species, but it would not be all too surprising to discover that larvae of both species feed on the same plant species. The genitalic slides were prepared using lignin pink stain and balsam as the mounting media.